PATENT ABSTRACTS OF JAPAN

(11) Publication number : 09-103948
(43) Date of publication of application : 22.04.1997

(51) Int.Cl. B24B 11/02

(21) Application number : 07-259638
(22) Date of filing : 06.10.1995

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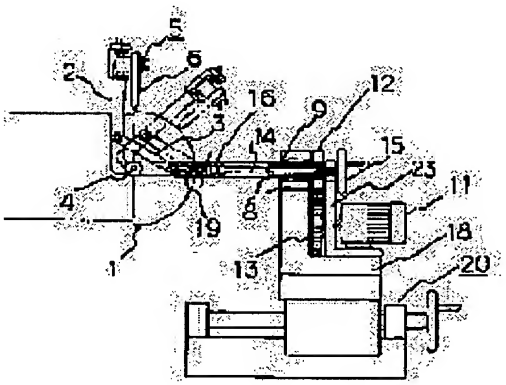
(54) MACHINING METHOD FOR HEMISPHERICAL SURFACE

(57) Abstract:

PROBLEM TO BE SOLVED: To machine the hemispherical surface of even a relatively brittle molding with safety and high machining efficiency by holding a workpiece into place, setting a cutting tool so that its edge cuts the portion to be machined, and rotating the cutting tool about the workpiece.

SOLUTION: A ceramic-powder molding 1 that is cylindrical and has an end approximately in the form of a hemispherical surface is horizontally secured to a workbench by a V-block before it is sintered. Then alignment is carried out using three-axis movement means 20 for horizontal planes and for the vertical direction so that the center of a sphere as seen from the end of the machined part of the work 1 coincides with the center of rotation of a hollow rod 8, and then the edge of a cutting tool 6 is positioned using a tool adjusting mechanism 5 so that a predetermined diameter of the sphere is given. Next, a motor 11 is rotated to rotate the hollow rod 8 via spur wheels 13, 14. Therefore, a link 2 connected by an approximately U-shaped base 7 and a pin 4 which are secured to the hollow rod 8 is also rotated, with the result that the cutting tool 6 rotates about the work 1.



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[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]